MEDICHOICE®

Blanket Warmer Operating Manual

Blanket Warmer Operating Manual

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General Specifications

The Blanket Warming Cabinetôs interior is constructed utilizing type 300 stainless steel. The exterior is constructed of all welded and formed 18 gauge magnetic type stainless steel except for the back and bottom sections. These are manufactured of industrial grade galvanized steel. The shelving is also perforated 18 gauge type stainless steel.

Insulation for all sides, top and bottom is high density rigid fiberglass covered with a reflective thermal barrier. Insulation on the doors is of the same type of material.

All doors are energy efficient self- closing, factory adjusted, with commercial spring loaded, heavy duty double hinges. Gaskets are high quality commercial grade non-latex magnetic closure for positive ñquick sealò to eliminate leakage. Doors are standard hinged on right side but can be customized for left side with an up charge.

Low Voltage digital controls are programmable and lockable with LED illumination, preset visual alarms and preset temperature for each compartment and are located on the front top service compartment. Temperature may be set between 60 and 140 degrees F, plus or minus 2 degrees F. The visual alarm may be set at plus or minus 1 degree F with the temperature at 100 degrees F.

Electrical is 120V with highly visible illuminated on \ off switch located at front on top service compartment. Optional 220V is available for up charge. Heating is by low voltage 250 watt heater strips, 1.5ò wide for extended life and low energy usage. All wiring is high temperature with commercial connectors. Heated air is thermostatically controlled by energy efficient commercial grade fans with forced air and vented stainless steel duct works. All controls, fans, wiring and heater assemblies are easily accessible for repairs.

CuVerro Anti-microbial Copper Handles that kill more than 99.9% of bacteria left behind by dirty hands within two hours.

ETL Listed.

Made in USA

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Single Door Blanket Warming Cabinets ï Full Size 72òTall

- Type 300 Solid Stainless Steel Double Walled and Insulated Construction with two door options: single insulated glass or stainless steel. Insulation for all sides, top and bottom is high-density rigid fiberglass. Insulation on doors is of the same type of material.
- Interior constructed of all welded and formed 20 gauge type stainless steel.
- Exterior is constructed of all welded and formed 18 gauge type stainless steel, except for the back and bottom sections, which are industrial grade galvanized steel.
- Dimensions: Exterior: 30" W x 24" D x 72" H
  Interior: 28" W x 17.5" D x 65" H
- CuVerro Anti-microbial Handle
- Electrical is 120V, 50/60 Cycles. Highly visible illuminated on/off switch located at top of service compartment. Energy efficient, commercial grade fans circulate heated air thru vented stainless steel ducts
- Low voltage digital controls are programmable and lockable with LED screen, preset alarms and preset temperature. Temperature may be set between 60º and 140º F, +/- 2º F. Alarms may be set at +/- 1º with temperature at 100º F
- All doors are energy efficient self-closing, factory adjusted with commercial spring loaded heavy-duty double hinges. Gaskets are magnetic and commercial grade for positive ñquick sealòto eliminate leakage. Doors are standard hinged on right side.
- ETL Listed with Hospital Grade Plug and Limit Switch
- FIVE Year warranty on ALL Parts and ONE Year on Labor

BW3072G: Full Size, Single Glass Door

BW3072S: Full Size, Single Solid Door

Blanket Warmer Operating Manual

Double Door Blanket Warming Cabinets ï Full Size 72òTall

- Type 300 Solid Stainless Steel Double Walled and Insulated Construction with two door options: single insulated glass or stainless steel. Insulation for all sides, top and bottom is high-density rigid fiberglass. Insulation on doors is of the same type of material.
- Interior constructed of all welded and formed 20 gauge type stainless steel.
- Exterior is constructed of all welded and formed 18 gauge type stainless steel, except for the back and bottom sections, which are industrial grade galvanized steel.
- Dimensions: Exterior: 30" W x 24" D x 72" H
  Interior Upper: 28" W x 17.5" D x 24" H, Lower: 28" W x 17.5" D x 30" H
- CuVerro Anti-microbial Handles
- Electrical is 120V, 50/60 Cycles. Highly visible illuminated on/off switch located at top of service compartment. Energy efficient, commercial grade fans circulate heated air thru vented stainless steel ducts
- Low voltage digital controls are programmable and lockable with LED screen, preset alarms and preset temperature. Temperature may be set between 60º and 140º F, +/- 2º F. Alarms may be set at +/- 1º with temperature at 100º F
- All doors are energy efficient self-closing, factory adjusted with commercial spring loaded heavy-duty double hinges. Gaskets are magnetic and commercial grade for positive ñquick sealòto eliminate leakage. Doors are standard hinged on right side.
- ETL Listed with Hospital Grade Plug and Limit Switch
- FIVE Year warranty on ALL Parts and ONE Year on Labor

BW3072DG: Full Size, Double Glass Door

BW3072DS: Full Size, Double Solid Door

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Half Size /Under Counter Blanket Warming Cabinets ï 36òTall

- Type 300 Solid Stainless Steel Double Walled and Insulated Construction with two door options: single insulated glass or stainless steel. Insulation for all sides, top and bottom is high-density rigid fiberglass. Insulation on doors is of the same type of material.
- Interior constructed of all welded and formed 20 gauge type stainless steel.
- Exterior is constructed of all welded and formed 18 gauge type stainless steel, except for the back and bottom sections, which are industrial grade galvanized steel.
- Dimensions: Exterior: 30" W x 24" D x 36" H
  Interior: 28" W x 17.5" D x 24" H
- CuVerro Anti-microbial Handles
- Electrical is 120V, 50/60 Cycles. Highly visible illuminated on/off switch located at top of service compartment. Energy efficient, commercial grade fans circulate heated air thru vented stainless steel ducts
- Low voltage digital controls are programmable and lockable with LED screen, preset alarms and preset temperature. Temperature may be set between 60º and 140º F, +/- 2º F. Alarms may be set at +/- 1º with temperature at 100º F
- All doors are energy efficient self-closing, factory adjusted with commercial spring loaded heavy-duty double hinges. Gaskets are magnetic and commercial grade for positive ñquick sealòto eliminate leakage. Doors are standard hinged on right side.
- ETL Listed with Hospital Grade Plug and Limit Switch
- FIVE Year warranty on ALL Parts and ONE Year on Labor

BW3036G: Half Size, Glass Door

BW3036S: Half Size, Solid Door

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Counter Top Blanket Warming Cabinets ï 24òTall

- Type 300 Solid Stainless Steel Double Walled and Insulated Construction with two door options: single insulated glass or stainless steel. Insulation for all sides, top and bottom is high-density rigid fiberglass. Insulation on the doors is of the same type of material.
- Interior constructed of all welded and formed 20 gauge type stainless steel.
- Exterior is constructed of all welded and formed 18 gauge type stainless steel, except for the back and bottom sections, which are industrial grade galvanized steel.
- Dimensions: Exterior: 30" W x 24" D x 24" H
  Interior: 28" W x 17.5" D x 16" H
- CuVerro Anti-microbial Handles
- Electrical is 120V, 50/60 Cycles. Highly visible illuminated on/off switch located at top of service compartment. Energy efficient, commercial grade fans circulate heated air thru vented stainless steel ducts
- Low voltage digital controls are programmable and password lockable with LED screen, preset alarms and preset temperature. Temperature may be set between 60º and 140º F, +/- 2º F. Alarms may be set at +/- 1º with temperature at 100º F
- All doors are energy efficient self-closing, factory adjusted with commercial spring loaded heavy-duty double hinges. Gaskets are magnetic and commercial grade for positive ñquick sealòto eliminate leakage. Doors are standard hinged on right side.
- ETL Listed with Hospital Grade Plug and Limit Switch
- FIVE Year warranty on ALL Parts and ONE Year on Labor

BW3024G: Counter Top, Glass Door

BW3024S: Counter Top, Solid Door

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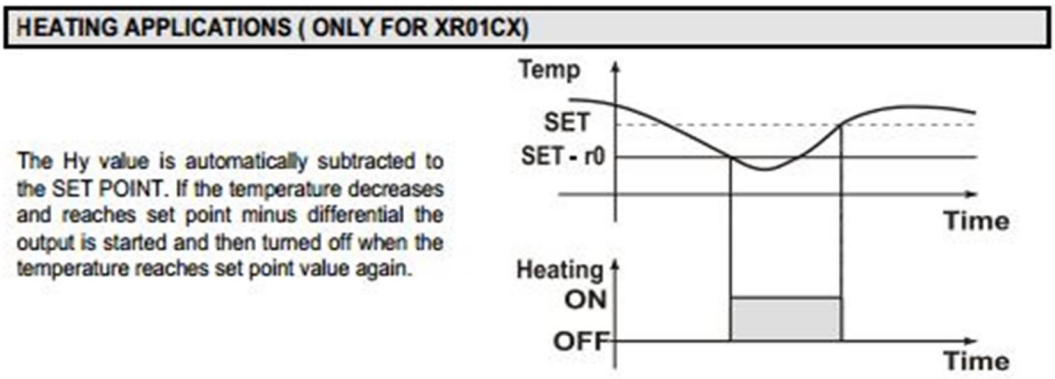
GENERAL INFORMATION

Safety Precautions

- See Installation & Operating Instructions for XR01CX, General Warnings
- Check that the supply voltage is correct before connecting the instrument
  - ❖ Full Size, Single Door: 120 V, 50/60 Cycle, single phase, 3 Wire, 7.3 Amps
  - ❖ Full Size, Double Door: 120 V, 50/60 Cycle, single phase, 3 Wire, 7.5 Amps
  - ❖ Half Size: 120 V, 50/60 Cycle, single phase, 3 Wire, 5.0 Amps
  - ❖ Counter Top: 120 V, 50/60 Cycle, single phase, 3 Wire, 2.9 Amps
- Do not expose to water or moisture.
- Use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent formation of condensation.
- Disconnect all electrical connections before any kind of maintenance.
- The digital controller (Model XR01CX) should only be serviced or opened by qualified personnel. It is a single stage temperature controller that provides a relay output to drive the compressor.

Digital Controller XR01CX, format 32 x 74 x 50 mm – Regulation Output


HEATING APPLICATIONS (ONLY FOR XR01CX)
The Hy value is automatically subtracted to the SET POINT. If the temperature decreases and reaches set point minus differential the output is started and then turned off when the temperature reaches set point value again.
Temp
SET
SET - r0
Time
Heating
ON
OFF
Time

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START UP INSTRUCTIONS

When you first receive your blanket warmer, plug it in and allow a minimum of 1 hour to heat. You will know it has reached the pre-set temperature of **130 F °** when LED ❄ goes off.

On initial start-up, temperature alarm is delayed for 120 minutes to allow temperature to set.

Your warmer has been set to **130** ° **F**. Temperature will vary + / - 2 degrees.

The Alarm is set at a Minimum 90 ° **F** and a Maximum **150** ° **F.**

Front Panel Display

SET — To display target set point, in programming mode it selects a parameter or confirm an operation

To start a manual defrost (Only XR02CX)

In programming mode it browses the parameter codes or increases the displayed value

AUX — In programming mode it browses the parameter codes or decreases the displayed value

KEYS COMBINATION

▽ + △	To lock or unlock the keyboard
SET + ▽	To enter in programming mode
SET + △	To return to room temperature display

LED	MODO	SIGNIFICATO
❄	On	Compressore enabled
	Flashing	Anti short cycle delay enabled (AC parameter)
❄	On	Defrost in progress
	Flashing	Dripping in progress
°C	On	Measurement unit
	Flashing	Programming mode
°F	On	Measurement unit
	Flashing	Programming mode

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FRONT PANEL COMMANDS

HOW TO SEE THE SET POINT TEMPERATURE

1. Push and immediately release the SET key. The set point will be shown.
2. The set point temperature displays for 5 seconds or push the SET to return to the normal display.

HOW TO CHANGE SET POINT TEMPERATURE

1. Press the SET key for more than 2 seconds to change the set point value.
2. The value of the set point temperature will be displayed and the ° C or ° F LED starts blinking.
3. You can now raise or lower temperature with ≠ or Ç keys.
4. After you set your desired temperature, push the SET key again or wait 10 seconds.

Note: You cannot increase the set point temperature higher than the maximum temperature it was originally set to with the above procedure (150 ° F)

HOW TO LOCK / UNLOCK THE KEYBOARD

To LOCK the keyboard, press for more than 3 seconds both the ≠ and Ç keys. The ñOFò message will be displayed and the keyboard will be locked.

To UNLOCK the keyboard, press for more than 3 seconds both the ≠ and Ç until the ñONò message is displayed.

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DIGITAL CONTROLLER

TECHNICAL DATA

Housing:	Self-extinguishing ABS
Case:	Frontal 32 x 74 mm, depth 50 mm
Mounting;	Panel mounting in a 71 x 29 mm panel cut-out
Protection:	IP20, Frontal Protection: IP65
Connections:	Screw terminal block </= 2.5 mm wiring
Power Supply:	110VAC ±10%, 50/60 Hz
Power Absorption:	3.5 VA max
Display:	2 digits, red LED, 14.2 mm high, Inputs: 1 NTC
Digital Input:	Free voltage contact
Relay Outputs:	SPST 20(8) A 250VAc
Data Storing:	On the non-volatile memory (EEPROM)
Kind of Action:	1B
Pollution Grade:	2
Rated Impulsive Voltage:	2500V
Overvoltage Category:	II
Operating Temperature:	0 + 60 ° C
Storage Temperature:	-25 + 60 ° C
Relative Humidity:	20 + 85 % (no condensing)
Measuring/Regulation Range:	NTC -40 + 110 ° C
Resolution:	0, 1° C or 1° C or 1° F
Accuracy:	Ambient temp 25° C ± 0.1 ° C ± 1 digit

DIGITAL CONTROLLER

ALARM SIGNALLING

Message	Cause	Outputs
P1	Room Probe Failure	ñCyò Unit ON time with faulty probe (0+99 min) time during which the unit is active in case of faulty thermostat probe. With Cy=0 unit is always OFF. ñCnò Unit OFF time with faulty probe (0+99 min) time during which the unit is OFF in case of faulty thermostat probe. With Cn=0 unit is always active
HA	Maximum Temperature Alarm	Outputs Unchanged
LA	Minimum Temperature Alarm	Outputs Unchanged
EA	External Alarm	Outputs Unchanged.
CA	Serious External Alarm	ALL Outputs OFF
dA	Door Open	Unit and fans restart

ALARM RECOVERY

Probe alarm **P1** starts seconds after the fault in the related probe; the alarm automatically stops after the probe restarts the normal operation. Check connections before replacing the probe. Temperature alarms **HA** and **LA** automatically stop as soon as the temperature returns to normal values. Alarms **EA** and **CA** recover as soon as the digital input is disabled.

MAINTENANCE

Maintaining Air Flow

As you should inspect your clothes drier at home for lint build up it is our recommendation that the rear air channels of a blanket warmer be inspected every six months to maintain proper air flow, lower the costs of energy, increase fan life and maintain a fireproof environment.
Many hospitals have been utilizing low cost ñether blanketsò made outside the USA. Many of these blankets are of very poor quality and produce large amounts of lint that may become attached to the air channel walls. See recommendation on blankets.

Maintenance Procedure

1. Disconnect blanket warmer from power.
2. Open blanket warmer door.
3. Remove blankets from racks, and remove racks from unit.
4. Remove back wall retaining screws using 5/16ò socket.
5. Vacuum out excess lint behind back wall including areas around the back wall, vents, wiring, heating elements and fan housing.
6. Re-install back wall and secure using retaining screws.
7. Vacuum any lint remaining in blanket warmer compartment.
8. Replace racks to rack clips and restock blankets.
9. Reconnect blanket warmer to power.

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CuVerro Anti-microbial Copper Handles

CuVerro Anti-microbial Cooper is laboratory tested, EPA registered and proven effective in clinical trials at killing the pathogens responsible for spreading healthcare associated infections (HAI). The CuVerro anti-microbial copper surface continuously kills bacteria left behind by dirty hands, killing more than 99.9% of bacteria within 2 hours.

Pathogens responsible for spreading HAI include: Staphylococcus aureus, Enterobacter aerogenes, Pseudomonas aeruginosa, E.coli O157:H7, Methicillin-Resistant Staphylococcus Aureus (MRSA), and Vancomycin-Resistant Enterococcus faecalis (VRW).

Proper Care and Use

Clean and sanitize according to standard practice. Healthcare facilities must maintain the product in accordance with infection control guidelines. The use of this surface is a supplement to and not a substitute for standard infection control practices. Users must continue to follow all current infection control practices, including those practices related to cleaning and disinfection of environmental surfaces. This surface has been shown to reduce microbial contamination, but does not necessarily prevent cross contamination. This surface may be subject to recontamination and the level of active bacteria at any particular time will depend on the frequency and timing of recontamination and cleanliness of the surface (among other factors).In order to have proper antimicrobial effect, the product must be cleaned and maintained according to the directions for use.

Cleaning agents typically used for traditional hard, non-porous touch surfaces are permissible. The appropriate cleaning agent depends on the type of soiling and the measure of sanitization required. Normal tarnishing or wear of this product will not impair the anti-microbial effectiveness.

DO NOT WAX, PAINT, LACQUER, VARNISH OR OTHERWISE COAT THE HANDLES!

EPA Est. No. 089588-OH-001

ECRI and AORN Temperature Recommendations

There are no national standards for blanket and fluid warming cabinet temperature settings. However, in 2006 the ECRI Institute issued a warning that fluid and blanket warmers should be limited to a temperature no higher than 43° C (110° F) to decrease the risk of thermal injuries to patients. In 2009, ECRI published a hazard report update, raising their previous recommendation for a safe blanket warming temperature limit to 54.44° C (130° F), with the provision that IV fluids should not be warmed in the same cabinet. When ECRI changed their recommendations in 2009, AORN also amended their Recommended Practice for a Safe Environment of Care (2010) to be consistent.

ECRI and AORN recommend that the fluid warmer temperature and the length of time that fluids should remain in the warming cabinet should be requested from the manufacturer of each fluid or solution, since the requirements may be different for each. As general guidance, the AORN Recommendation for the Practice Environment of Care, Recommendation VIII states that fluids and solutions should be labeled with a date that indicates when the fluids should be removed or when they were placed in the warmer. They also state that IV Fluids should be warmed using technology designed for this purpose, that solutions should be rotated on a first in-first out basis and that IV bags and solution bottles should not be used as patient warming devices.

AORN also recommends that warming cabinet temperatures should be checked at regular intervals per the organizationôs policy and documented on a temperature log or record,

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Blanket Recommendations

Many hospitals and surgery centers have been switching to low cost ñether blanketsò made outside the USA.

We Do Not Recommend Woven Ether Blankets

1. These low-cost ñether blanketsò are constructed of poorly processed materials that are not tightly woven.
2. They shrink and deteriorate very quickly via necessarily harsh hospital launderings.
3. Because of their poor insulating quality they do not provide a sustained ñpatient warmth factorò and therefore nurses use more than one blanket or increase the blanket warmer temperature higher than recommended by safety experts. According to clinicians in the hospital workplace this increase in temperatures above 110F creates a potentially unsafe and dangerous environment for some patients.

We Do Recommend Knitted Warming Blankets

1. Knitted blankets made of a cotton / polyester blend.
2. They do not shrink or deteriorate as rapidly. (Usually last 5 to 6 times longer than cheap woven imports)
3. They are thermal and have a far superior insulating capability and will sustain a ñpatient warmth factorò much longer.
4. Eliminates the utilization of two cheaper blankets or having the nurse to go back to the warmer for another blanket.

Placement of Blankets in Cabinet

1. For best results, there should be at least 1ò of space between the blanket and the sides, top and back of the blanket warming compartment. The blankets should be loosely rolled or stacked as well. This will allow for maximum air circulation and more rapid heating of the blankets to the set point temperature.

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PARTS LIST FOR BLANKET WARMERS

Technical Service Call 800-860-4716

PART #	DESCRIPTION
3MW1-030004	STAINLESS STEEL WARMING CABINET SHELF CLIP
3MW1-030491	DIGITAL LED CONTROLLER PROGRAMMER (GRAY) (CUSTOM XR01CX CONTROLLER)
3MW1-060008	CORD, FAN 60" AXIAL
3MW1-060188	FAN, 115V (4.5ò), HITEMP
3MW1-070779	MAGNETIC GASKET FOR FULL SIZE, SINGLE COMPARTMENT BLANKET WARMER DOOR: NON-LATEX, DARK CHARCOAL GRAY (FITS GLASS OR SOLID DOOR)
3MW1-070805	MAGNETIC GASKET FOR TOP DOOR OF DOUBLE DOOR WARMING CABINET: NON-LATEX, DARK CHARCOAL GRAY. ALSO FITS UNDER-COUNTER (HALF SIZE) CABINETS
3MW1-070818	MAGNETIC GASKET FOR LOWER DOOR OF DOUBLE DOOR WARMING CABINET: NON-LATEX, DARK CHARCOAL GRAY
3MW1-080163-CHR	HEATER BAR, 120 VOLT, 250 WATT
3MW1-190174	ILLUMINATED ON / OFF ROCKER SWITCH
3MW1-190805	SWITCH, LIMIT CONTROL, 120 VOLT
3MW1-190818	SENSOR PROBE FOR WARMING CABINET, 5ôCABLE
3MW1-610009	OVERHEAT THERMOSTAT, 40F TO 150F DEGREES

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LIMITED WARRANTY

The Manufacturer warrants to the original purchaser its new Blanket Warmer (except for components not warranted under ñExclusionsò) to be free from defects in material and workmanship for a period of 5 years under normal use and service. The Manufacturerôs obligation under this warranty is limited to the repair or replacement, at the Manufacturerôs option, of the parts or the product defects of which are reported to the Manufacturer within the applicable warranty period and which, upon examination by the Manufacturer prove to be defective. The Manufacturer reserves the right to require the Buyer to return the Blanket Warmer for work covered under this warranty at the Buyerôs expense.

The applicable warranty period, measured from the date of delivery to the original user, shall be 5 years. After the first year, the Manufacturerôs obligation shall be further limited to cover only the cost of replacement parts and shall exclude labor costs.

Exclusions:
This warranty does not cover and the manufacturer shall not be liable for the following:

- Repairs and replacements because of misuse, abuse, negligence, alteration, accident, freight damage or tampering
- Products considered to be of a consumable nature
- Accessories or parts not manufactured by the Manufacturer
- Charges by anyone for adjustments, repairs, replacement parts, installation, or other work performed upon or in connection with such products which is not expressly authorized in writing in advance by the Manufacturer

UNLESS EXPRESSLY SET FORTH IN THIS WARRANTY THERE ARE NO OTHER WARRANTIES WHETHER EXPRESS OR IMPLIED, OF FITNESS AND/OR MERCHANTABILITY OR ANY OTHER WARRANTY IMPLIED BY CUSTOM, USAGE OR COURSE OF DEALING.

The Manufacturerôs only obligation under this warranty is the repair or replacement of defective parts. The Manufacturer shall not be liable for any direct, special, indirect, incidental, exemplary, or consequential damages or delay, including, but not limited to, damages for loss of profits or loss of use. No representative has any authority to change the above warranty or the Manufacturerôs liability.

This document supersedes all other previous warranty provisions. No other warranty is applicable to this product.

This warranty is only in effect in the United States and Canada.